WO 2005/089079 PCT/SE2005/000404

15

CLAIMS

A device for displaying information in a vehicle,
comprising

a unit (6) for creating a real image containing information relevant to a driver (1), to be reflected in a reflective viewing surface (5) located directly above the field of vision (α) actively used by the driver to survey the traffic situation, and thereby generating a virtual image (9), characterised by

10

15

25

a second reflecting surface (10) provided behind or beside the driver's head, with the driver in his or her normal position, at essentially the same level as the viewing surface or higher,

an end section of an optical path between the unit (6) and the viewing surface (5) in use extending between said second reflecting surface (10) and the viewing surface (5).

- 2. A device according to claim 1, wherein said unit (6) and said second reflecting surface (10) form an integrated display unit (15).
 - 3. A device according to claim 2, wherein the integrated unit (15) is arranged to be rotatable about two axes (A, B).
 - 4. A device according to any one of the preceding claims, wherein the device is adapted for mounting in a recess (17) provided in an existing partition wall (18) located behind the driver.
- 5. A device according to any one of the preceding claims, further comprising a second image unit (13), adapted to generate an image that is accessible to passengers in the vehicle.
- 6. A device according to any one of the preceding claims, wherein the second reflecting surface (10) is curved in such manner that the virtual image is magnified.

WO 2005/089079 PCT/SE2005/000404

16

7. A system for displaying information in a vehicle, comprising

a reflective viewing surface (5) provided directly above the field of vision (α) actively used by the driver to survey the traffic situation,

a unit (6) for creating a real image containing information relevant to a driver (1), to be reflected in the viewing surface (5), and thereby generating a virtual image (9), characterised by

a second reflecting surface (10) provided behind or beside the driver's head, with the driver in his or her normal position, at essentially the same level as the viewing surface or higher,

an end section of an optical path between the unit (6) and the viewing surface (5) used extending between said second reflecting surface (10) and the viewing surface (5).

- 8. A system according to claim 7, wherein the second reflecting surface (10) is arranged in a rotatable manner.
- 9. A system according to claim 7 or 8, wherein the viewing surface (5) is non-transparent.

20

25

35

- 10. A system according to any one of claims 7-9, wherein the viewing surface (5) is located in the plane of the windscreen (2).
- 11. A system according to any one of claims 7-10, further comprising a second viewing surface (5') to create a second virtual image.
- 12. A system according to any one of claims 7-11, wherein the second reflecting surface (10) is curved in such manner that the virtual image is magnified.
 - 13. A system according to any one of claims 7-12, wherein the viewing surface (5) and/or an optional second viewing surface (5') is/are curved in such manner that the virtual image is magnified.
 - 14. A system according to any one of claims 7-13, comprising a device according to any one of claims 1-6.

WO 2005/089079 PCT/SE2005/000404

17

- 15. A system according to any one of claims 7-13, wherein the unit (6) is located at a distance from said second reflecting surface (10).
- 16. A system according to claim 15, wherein the image unit (6) is adapted to create an image comprising a first zone intended to be displayed to passengers in the vehicle, either directly or by reflection, and a second zone intended to be reflected in said viewing surface (5).
- 17. A system according to claim 16, wherein said second zone is smaller than said first zone, so that the information displayed therein is difficult to perceive directly, and wherein said second zone is magnified by the viewing surface (5) and/or the second reflecting surface (10).
 - 18. A vehicle equipped with a system according to any one of claims 7-17.